

## NEW PLANTS FROM NORTHEASTERN SONORA, MEXICO AND NOTES ON EXTENSIONS OF RANGE<sup>1</sup>

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BEGINNING IN 1938 the writer spent four consecutive summers in northeastern Sonora, Mexico, principally in the region of the Río de Bavispe, collecting plants for the University of Michigan Botanical Gardens and the Arnold Arboretum of Harvard University. Although not particularly inaccessible this area has received practically no attention from botanists. The only previous collectors in this region, besides those of the Mexican Boundary Survey, were Hartmann and Lloyd, botanists of the Lumholtz Archeological Expedition, who collected along the route of travel from Bisbee, Arizona through the Sonoran towns of Fronteras, Oputo, Granados, Bacadéhuachi, Nácori and thence into Chihuahua. This expedition was in Sonora only about three months.

More than 4000 numbers were collected in northeastern Sonora by the writer and those who at different times accompanied him (LeRoy H. Harvey, Edwin A. Phillips and José Vera Santos). Among them are the following novelties as well as certain other species whose presence in the area represents a notable range extension. A detailed report on the collections as a whole is in preparation and will be published at a later date.

*Ceterach Dalhousiae* (Hook.) C. Chr.

In 1940 Edwin A. Phillips collected this little known fern in the Cañón de Bavispe, a few miles west of the village of Bavispe (*E. A. Phillips* 547). Northeastern Sonora must therefore be included in the peculiar range of this plant, formerly known only from southeastern Arizona, Abyssinia and the Himalayan region of Asia. Mr. Phillips also found in this same location *Asplenium exiguum* Bedd. (*E. A. Phillips* 550), which has a similar distribution but which had been collected previously in northern Mexico.

*Populus monticola* Brandeg.

Originally described from Baja California, this tree was later collected by Palmer at Guaymas, Sonora. The writer's collection (*S. S. White* 691) from Arroyo del Pulpito, north of Colonia Oaxaca, probably represents the northern limit of the species, since this point is only about 60 miles south of the United States border, where it is unknown.

*Ostrya virginiana* (Mill.) Koch.

C. H. and M. T. Muller have collected this species in Nuevo León, but

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the writer has seen no record of its presence in western Mexico, except the recent report by Gentry<sup>2</sup> who collected it in the Sierra Surotato in northern Sinaloa. The writer found it in the Sierra de El Tigre, Sonora, growing with walnut, sycamore, ash, maple and oak (*S. S. White* 583, 605, 3388, 3504). This wide-spread tree of eastern North America thus has at least two isolated outposts on the Pacific watershed, separated by a distance of 500 miles or more from the nearest eastern station.

Undoubtedly *Ostrya* in Sonora and Sinaloa is a relic of Miocene and Pliocene times when *O. oregoniana* Cheney (considered to be identical with or hardly distinguishable from *O. virginiana*) flourished in the northwestern United States; at present it is not possible to tell, however, whether *O. oregoniana* ranged as far south as Sonora and Sinaloa, or whether *O. virginiana* extended westward to these localities through southern United States or northern Mexico.

*Phacelia heterophylla* Pursh var. *sonorensis* var. nov.

Herba perennis, robusta, erecta, 15–30 cm. alta, ubique canescenter hispida et glandulosi-pubescent. Folia breve petiolata, ovata, majora 5 cm. longa et 2.5 cm. lata. Corolla albida.

TYPUS: *S. S. White* 4641, "Puerto del Cumarito, Sierra de la Cabellera, Sonora, Mexico," in Herbario Universitatis Michiganensis.

This variety differs from the typical form of the species in being densely, although minutely, glandular in all its parts except the corolla and internal floral organs; the leaves are also smaller and generally lack the one or two small leaflets which are commonly present in *P. heterophylla*.

The type was collected at an elevation of 5400 feet in an oak-grassland association. The Sierra de la Cabellera lies north of the Río de Bavispe and west of the Sierra del Pulpito.

*Pentstemon campanulatus* (Cav.) Willd. var. *subglandulosus* var. nov.

Herba erecta, perennis, 60 cm. alta. Folia elliptica, acuta, in specimine typico majora 7 cm. longa et 2 cm. lata, inferiora petiolata, superiora sessilia, ab media parte ad apicem grosse serrata vel serrulata, floralia integra.

TYPUS: *S. S. White* 2645, "Cañón de Huépari, Sonora, Mexico," in Herbario Universitatis Michiganensis.

This variety differs markedly in aspect from *P. campanulatus*, but except for the size and shape of the leaves the only other significant difference noted is in the distribution of the glandular hairs. In the variety they are confined to the calyx and pedicels, but in the typical form of the species these parts as well as the corolla, peduncles, upper portion of the stem and even the upper leaves are often copiously glandular-pubescent.

The type locality lies midway between the towns of Oputo and Huachinera at an elevation of 4300 feet. The vegetation is oak-grassland.

<sup>2</sup> GENTRY, HOWARD SCOTT. Notes on the vegetation of Sierra Surotato in northern Sinaloa. Bull. Torrey Bot. Club 73: 451–462, f. 1–5, 1946.



*Lonicera cerviculata* sp. nov.

Frutex 2 m. altus, ramis glabris, juvenilibus purpurei-glaucis, deinde flavescentibus et nitidis. Folia oblongi-ovata, supra glabra, subtus puberula et perspicue glauca, basi truncata, apice obtusa vel subacuta, 4–8.5 cm. longa, latitudine circiter  $\frac{2}{3}$  longitudinis. Dua vel tria summa paria foliorum perfoliata, oblonga, alia breviter petiolata, estipulata. Inflorescentiae spicatae, 1–3 terminales et aliae axillares solitariae in axillis paenultimi paris foliorum. Flores verticillati, a bracteis exterioribus 2 mm. longis et interioribus vix 1 mm. longis subtendentes. Calycis pars supra ovarium constricta 1 mm. longa, glauca, lobulis 5 ovatis vix 1 mm. longis. Corolla 12–14 mm. longa, aurantiaca vel rubella, siccitate flava, subventricosa, intus et extus glabra, lobulis 5 aequalibus. Stamina filamenta 1 mm. longa; antherae 2 mm. longae. Ovarium 3-loculatum, stylo glaberrimo in tubo corollae incluso. Fructus globosus, 4–5 mm. crassus, in tubulum calycis desinens. Semina 1–6, albida, compressa, ovoidea, foveolata, 3–4 mm. longa et ca. 2 mm. lata.

TYPUS: S. S. White 3422, "Las Tierritas de El Temblor, Sierra de El Tigre, Sonora, Mexico," in Herbario Universitatis Michiganensis.

This species belongs to the subgenus *Periclymenum* L. and to Rehder's subsection *Phenianthi*<sup>3</sup>, although its flowers are much smaller than those of other members of this group.

Besides the type the writer also refers to this species his collections 2832, 3934, 4195 and 4277, all of which, with the exception of 3934, are from the Sierra de El Tigre, not far from the type locality. The other specimen was found at Rancho de la Nacha, northeast of Nacozari. These have at times a single terminal spike and no axillary spikes; in some there is only one pair of connate leaves. In none of the specimens cited are any spikes to be found in the axils of the third pair of leaves, even when this pair is connate.

The name of this species refers to the neck-like calyx-tube which persists on the fruit, preserving the same size and shape that it had in flower. Its habitat is the pine-oak vegetational zone at elevations of 4500 to 6000 feet.

*Lonicera cerviculata* may be distinguished from *L. arizonica* Rehd., apparently its nearest relative, by its smaller flowers, elongate rather than capitate spikes, and the lack of ciliate hairs on the leaf margin.

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<sup>3</sup> REHDER, ALFRED. Synopsis of the genus *Lonicera*. Rep. Missouri Bot. Gard. 14: 27–232, pl. 1–20. 1903.